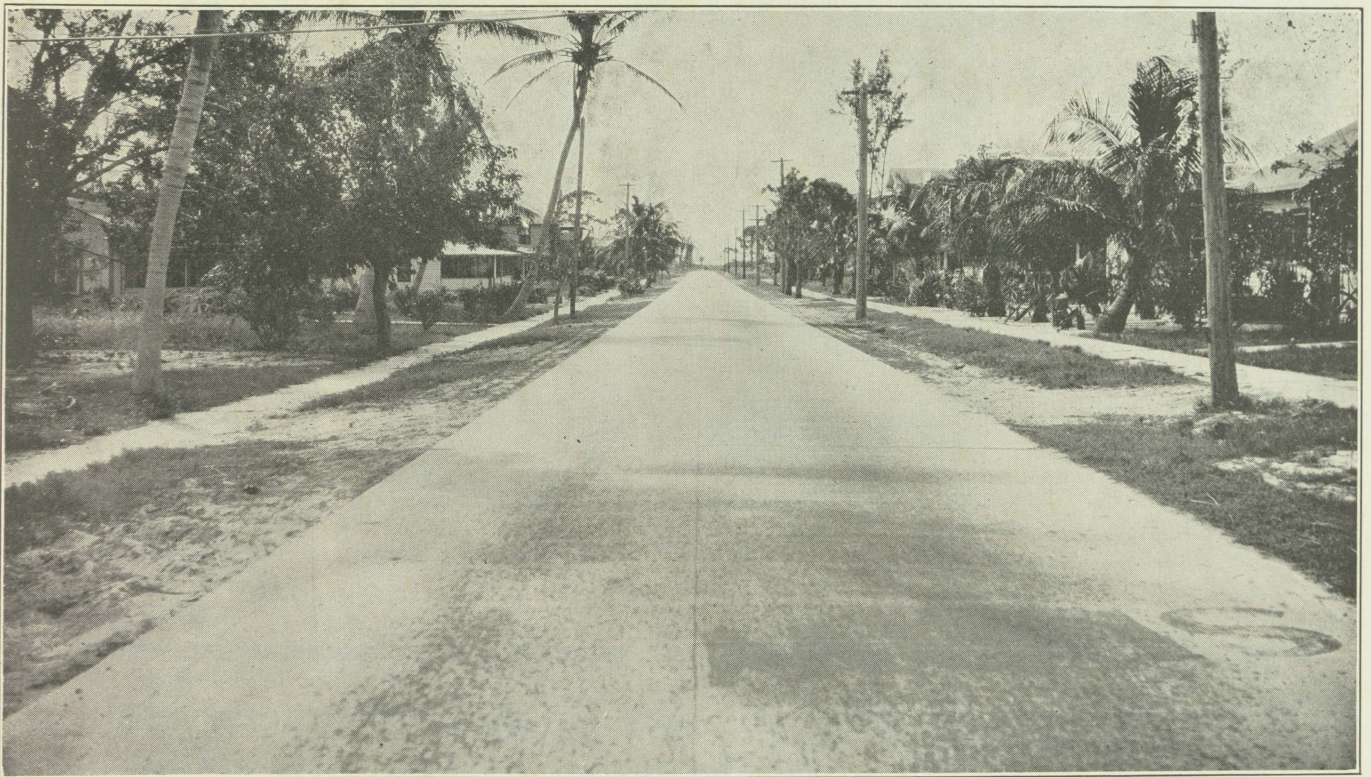


# FLORIDA HIGHWAYS

Published by the State Road Department

Vol. VII

No. 12



Project 683, Road 4, Palm Beach County.

\$1.00 Per Year

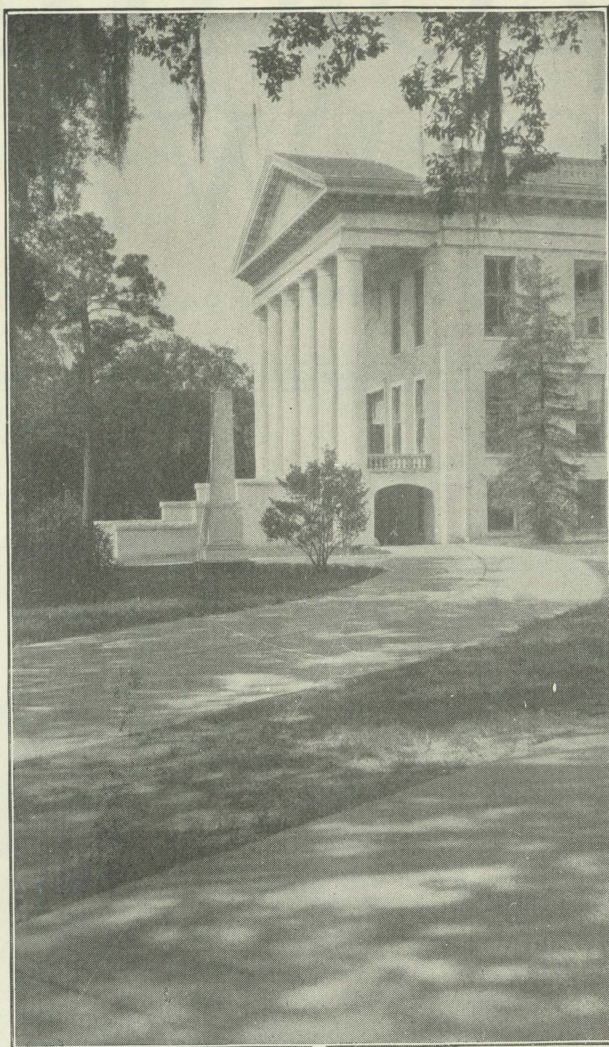
Single Copies 10c

December, 1930



# FLORIDA

Vol. VII  
No. 12



# HIGHWAYS

DECEMBER  
1930

## Transactions at Meeting of State Road Department, Held at Pensacola, December 10, 1930

**P**URSUANT to due and legal notice, a meeting of the State Road Department was held at Pensacola on December 10, 1930, with all the members present as follows: Robert W. Bentley, Chairman, William A. Shands, Mallie Martin, Ernest R. Graham and George B. Hills. B. M. Duncan, State Highway Engineer, and B. A. Meginniss, Attorney for the Department, were also present.

### **Santa Rosa County—Road 53**

Senator J. Turner Butler, representing Pensacola Bridge Corporation, and Hon. C. H. Overman, Chairman of the Board of County Commissioners of Santa Rosa County, appeared before the Department and requested that an additional convict camp be placed on the construction of Road 53.

On motion of Mr. Martin, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED, that the State Highway Engineer be authorized, as soon as the convict camp now working on Road 10 is available, to place the same on the grading of State Road 53.

Senator Butler and Mr. Overman likewise presented to the members a request that the Department join the counties of Escambia and Santa Rosa in approving legislation authorizing the construction of a bridge across Santa Rosa Sound near Grassy Point, and repealing the former Act of Congress for a bridge across Santa Rosa Sound at another location.

On motion of Mr. Hills, seconded by Mr. Martin, the following resolution was adopted:

BE IT RESOLVED, that this Department does act in accordance with the request of Santa Rosa and Escambia Counties and that it does endorse the bill now pending in Congress granting permit to Pensa-



cola Bridge Corporation for the construction of a bridge across Santa Rosa Sound near Grassy Point.

BE IT FURTHER RESOLVED, that the Chairman be and he is hereby requested to advise United States Senator Duncan U. Fletcher and Hon. Thos. A. Yon, member of Congress, of the action of this Department.

#### Escambia County—Roads 87 and 125

Mr. Winston E. Wheat, County Engineer of Escambia County, and Hon. Herbert Caro, Senator, appeared before the Department with a request of Escambia County that Roads 87 and 125 be taken over for maintenance by the State in 1931, the county agreeing to complete standard grades on same.

On motion of Mr. Shands, seconded by Mr. Martin, the following resolution was adopted:

BE IT RESOLVED, that the Chairman and the State Highway Engineer make an inspection of Roads 87 and 125 in Escambia County and report to this Department at its next meeting on the advisability of taking the same over for maintenance.

#### Escambia County—Road 104

Messrs. Wheat and Caro also presented to the Department a request that the Department undertake the construction of the bridge over Escambia River on State Road 104, and that the Department advocate legislation to extend said road to Barrineau Park. The Chairman advised the delegation that the State Road Department does not advocate legislation of this nature, leaving that function to the Legislature.

#### Hillsborough County—Road 5

Messrs. J. N. Holmes, J. T. Gunn and J. W. Lester, County Commissioners of Hillsborough County, appeared before the Department and requested that the Department proceed as rapidly as possible in letting contract for the construction of Road 5 from the Pasco County line to Tampa. They stated that they have procured 50% of the right of way for outfall ditches and assured the Department that the remainder will be secured as rapidly as possible.

They were advised that bids will be advertised as soon as the Department has received authority from the United States Bureau of Public Roads.

#### Okaloosa County

Mr. E. A. Moody, of Okaloosa County, presented to the Department a request that there be included in the 1931 budget a provision for the construction of Shoal River Bridge on Road 54, and also a request that the Department take care of the detour between Camp Walton and Niceville.

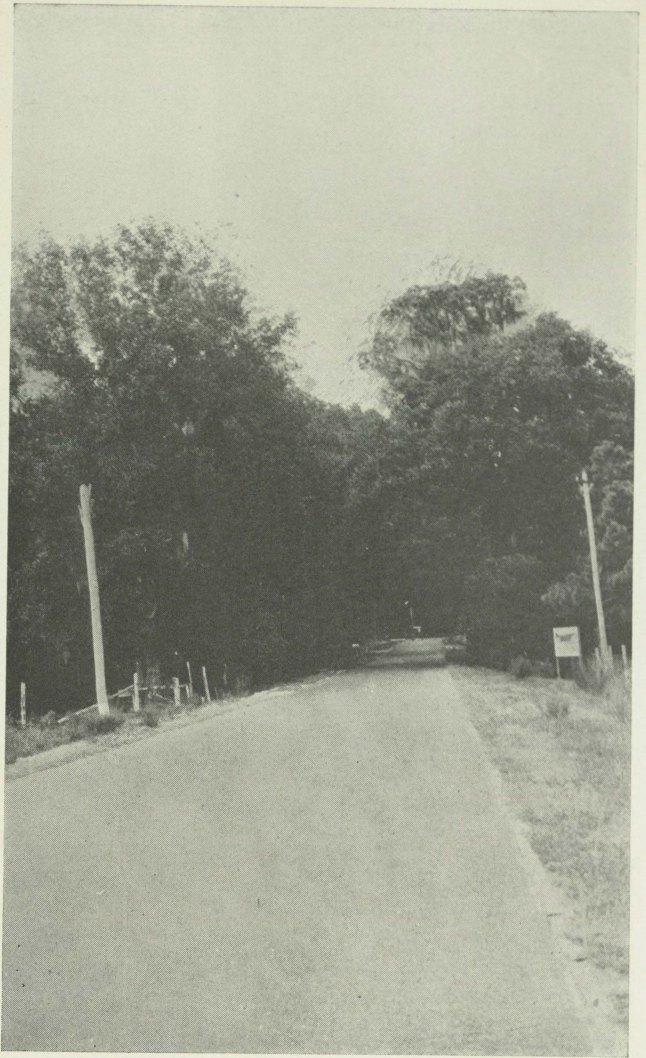
#### Santa Rosa County—Roads 37 and 62

Mr. C. H. Overman, Chairman of the Board of County Commissioners of Santa Rosa County, requested that the Department place in its betterment budget for 1931 State Road 37 and that it also include in its budget for construction State Road 62.

Mr. Overman invited the members of the Department to go out on Pensacola Bay and see the Pensacola bridge, now nearing completion, which connects the city with State Road 53.

#### Walton County—Road 152

Senator Caro presented to the members a request that a survey of State Road 152 in Walton County be authorized, the survey to include soundings and other necessary data in connection with the bridges on said road.



Project 36-A, Road 4, Indian River County.

On motion of Mr. Martin, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED, that the Engineer be and he is hereby instructed to cause to be surveyed State Road 152 in Walton County, said survey to include soundings and other necessary data in connection with the bridges on said road.

#### Report of Chairman

The Chairman made his usual monthly report of transactions of the Department since its last meeting at Miami in November.

#### Award of Contracts

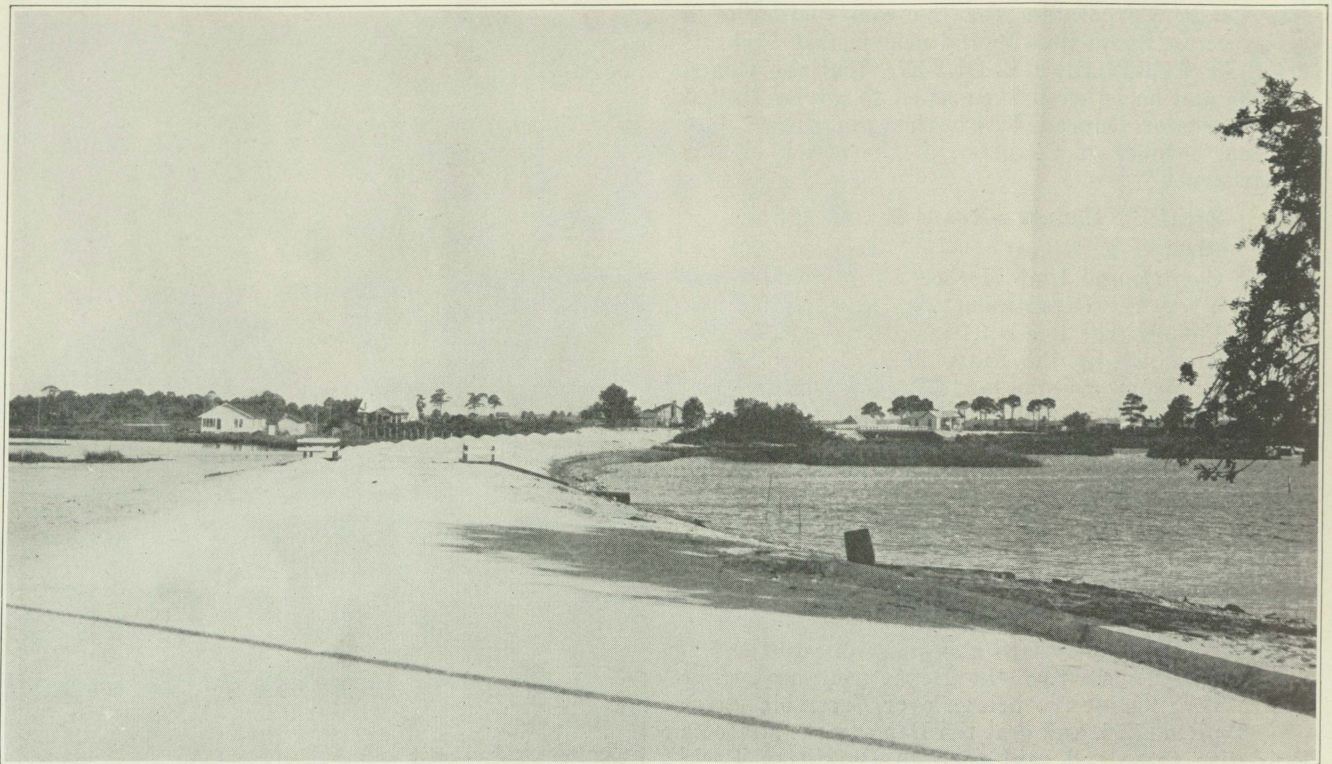
On motion of Mr. Shands, seconded by Mr. Martin, the following resolution was adopted:

WHEREAS, this Department on December 8th received bids for the construction of a certain project and for the furnishing of certain materials and supplies, as hereinafter listed; and

WHEREAS, the firms and individuals hereinafter named were and are hereby declared to be the lowest responsible bidders therefor; now, therefore,

BE IT RESOLVED, that contracts be and the same are hereby awarded for the construction of such project and furnishing of such materials, as follows, to-wit:





Proj. 677-D, State Road 13, Levy County

**Construction**

Proj.	Road	County	Type	Bidder	Price
806-C-D	25	Hendry	Broken Stone Base	L. B. McLeod Const. Co., Tampa, Fla.	\$284,212.56

**Materials**

745	19	Taylor	T. C. Prime	Republic Creo. Co., Mobile, Ala.	4,616.35
802-C	10	Okaloosa	Treated Timber and Piling	Pensacola Creo. Co., Pensacola, Fla.	1,236.90
610	2	Osceola	Treated Timber and Piling	Eppinger & Russell Co., Jacksonville, Fla.	969.22

**Award of Contracts Approved**

On motion of Mr. Shands, seconded by Mr. Martin, the following resolution was adopted:

WHEREAS, this Department on November 14th and November 25th received bids for the purchase of materials and supplies hereinafter listed; and

WHEREAS, the firms and individuals hereinafter named were and are hereby declared to be the lowest responsible bidders therefor; now, therefore,

BE IT RESOLVED, that the action of the Chairman in awarding the contracts hereinafter listed be and the same is hereby approved, which said contracts are as follows, to-wit:

**Materials**

Proj.	Road	County	Material	Bidder	Price
500-B	20	Bay	T. C. Prime	The Barrett Co.	\$ 4,589.96
550-C	20	Bay	T. C. Prime	American Tar Products Co.	4,384.76
515	20	Jackson	T. C. Prime	The Barrett Co.	1,409.27
71	4	Brevard	Timber and Piling	Guerin Lbr. Co., Melbourne, Fla.	5,823.80
927		Jackson	Treated Timber and Piling	Savannah Creo. Co.	805.12
801	48	Union and Bradford	Treated Timber and Piling	Carolina Wood Pres. Co., Charleston, S. C.	4,368.62

**Mule Feed**

Hagin-Peters Company, Jacksonville, Grains	\$ 1,297.50
Howard Grain Company, Jacksonville, Grains	2,190.25
Lewis Bear Company, Pensacola, Grains	2,245.12
Pace Company, Pensacola, Grains	775.58
Pace Company, Pensacola, Hay	620.00
R. P. Atwood Co., St. Louis, Hay	2,581.20

**Convict Rations**

Wilson Company, Jacksonville, Meat	\$ 118.67
Kingan Company, Tampa, Meat	362.70
Cudahy Company, Jacksonville, Meat	2,973.47
Swift Company, Pensacola, Meat	2,145.15
Hagin-Peters, Jacksonville, Groceries	5,405.24
Lewis-Bear, Pensacola, Groceries	1,984.32
Daffin Mercantile Co., Marianna, Groceries	274.81

**Minutes Approved**

On motion of Mr. Shands, seconded by Mr. Hills, the following resolution was passed:

BE IT RESOLVED, that the minutes of the meeting held at Miami on November 12th be approved.

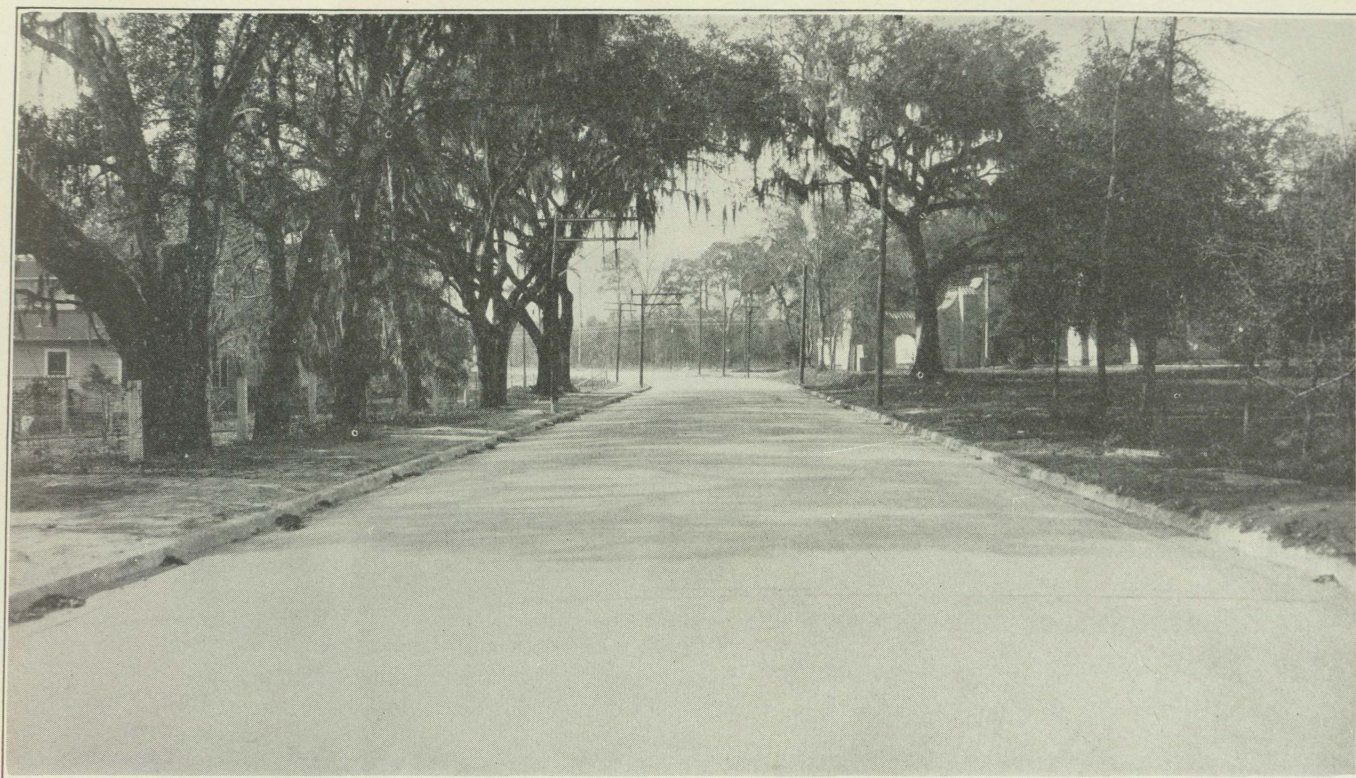
**Dade County—Road 4-A**

On motion of Mr. Graham, seconded by Mr. Hills, the following resolution was adopted:

WHEREAS, this Department has surveyed and located State Road 4-A between Miami and Homestead, in Dade County, as is shown by plat of said location on file in its office and in the office of the Clerk of the Circuit Court of Dade County, in Plat Book 36, pages 1 to 43, both inclusive; and

WHEREAS, said Department has found and determined, and does hereby find and determine that it is necessary, wise and expedient to secure, by purchase or condemnation, the lands necessary for a right of way for State Road 4-A; now, therefore,





State Road 10, Entering Tallahassee.

BE IT RESOLVED, that the Board of County Commissioners of Dade County be and they are hereby authorized and requested to secure for the Department, by purchase or condemnation, the lands necessary for a right of way for said road, to-wit: a strip of land 66 feet in width, the same being 33 feet on each side of the center line of said State Road 4-A between Miami and Homestead, as the same is now surveyed and located and shown upon said plat.

BE IT FURTHER RESOLVED, that said Board of County Commissioners be and they are hereby authorized to use the name of this Department in any condemnation proceeding or proceedings necessary to carry out the purposes of this resolution.

BE IT FURTHER RESOLVED, that in the event that they shall elect to proceed in the name of this Department, that their attorneys be and they are hereby authorized to prepare, execute and file all necessary pleadings, affidavits and documents in connection therewith and to prosecute such action to completion.

#### **Dixie Highway—Old Road 4—Brevard County**

The Chairman presented to the members resolutions adopted by the Orsino Civic Club and the Merritt Island & Peninsular Association protesting against the State taking over for maintenance the Old Dixie Highway, that is the road along Indian River formerly used as a link in State Road 4 before the construction of the latter. No action was taken by the Department, but the Secretary was requested to send these resolutions to Mr. Graham for his consideration in connection with the subject.

#### **Road 29—Okeechobee County**

The Chairman presented to the members a resolution adopted by the Board of County Commissioners of Okeechobee County, requesting that the Department take over for maintenance that section of Road 29 leading from the intersection of Parrot Avenue

and Lake Okeechobee southwestward to the Kissimmee River.

On motion of Mr. Hills, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED, that the request of Okeechobee County be referred to Mr. Graham, member of the Department from the Fourth Congressional District, with the request that he give it consideration in connection with matters to be passed on at the Budget Meeting of the Department in January.

#### **Road 19—Taylor County**

The Chairman presented to the members a resolution adopted by the Board of County Commissioners of Taylor County, that slag be used as a covering material on that section of Road 19 now being constructed by the Department in said county.

On motion of Mr. Shands, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED, that this Department does comply with the request of Taylor County that slag be used as a covering material on that section of Road 19 now under construction in said county, and that the Chairman be and he is hereby authorized to advertise for bids for such slag.

#### **Road 19—Madison County**

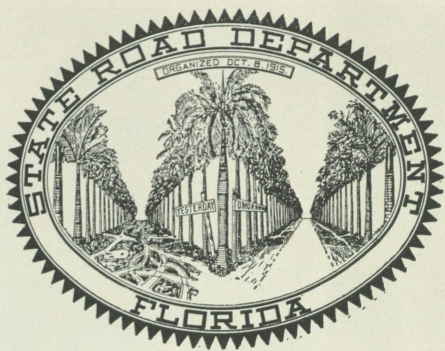
On motion of Mr. Shands, seconded by Mr. Graham, the following resolution was adopted:

BE IT RESOLVED, that the contract now being performed by Fred D. Beasley on State Road 19 in Taylor County be extended to include the heavy sand stretch in Madison County on said road, approximately one mile in extent.

#### **Road 30—Indian River and Osceola Counties**

The State Highway Engineer presented to the members a letter from Mr. L. K. Cannon giving an estimate of \$30,000 as the amount necessary to carry on the Department's operations on State Road 30 for the remainder of the year 1930. Mr. Cannon's





# Florida Highways

Published Monthly  
Official Publication of the State Road Department

## PERSONNEL OF DEPARTMENT

ROBERT W. BENTLEY (*Bradenton*), *Chairman*  
(*Official Residence, Tallahassee.*)

W. A. SHANDS, <i>Gainesville</i>	} <i>Members</i>
MALLIE MARTIN, <i>Crestview</i>	
GEORGE B. HILLS, <i>Jacksonville</i>	
ERNEST R. GRAHAM, <i>Pennsuco</i>	
KARL ROESCH, <i>Tallahassee, Secretary</i>	

## PERSONNEL OF EMPLOYEES IN GENERAL CHARGE OF THE WORK OF THE DEPARTMENT

### Engineering Division

B. M. Duncan, Tallahassee.....State Highway Engineer  
L. K. Cannon, Tallahassee.....Ass't. State Highway Engineer  
W. I. Nolen, Tallahassee.....Bridge Engineer  
H. C. Weathers, Gainesville.....Testing Engineer  
F. W. Berry, Jr., Tallahassee.....Office Engineer  
W. L. Thorpe, Gainesville.....Supt. of Equipment  
E. K. Fogg, Pensacola.....1st Division  
Counties—Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Okaloosa, Santa Rosa, Wakulla, Walton, Washington.

M. P. Phillips, Lake City.....2nd Division  
Counties—Baker, Bradford, Clay, Columbia, Dixie, Duval, Hamilton, Lafayette, Madison, Nassau, St. Johns, Suwannee, Taylor, Union.

R. L. Bow, West Palm Beach.....3rd Division  
Counties—Brevard, Broward, Collier, Dade, Glades, Hendry, Indian River, Lee, Martin, Monroe, Okeechobee, Palm Beach, St. Lucie.

L. B. Thrasher, Ocala.....4th Division  
Counties—Alachua, Citrus, Flagler, Gilchrist, Hernando, Lake, Levy, Marion, Orange, Putnam, Seminole, Sumter, Volusia.

R. K. Van Camp, Lakeland.....5th Division  
Counties—Charlotte, DeSoto, Hardee, Highlands, Hillsborough, Manatee, Osceola, Pasco, Pinellas, Polk, Sarasota.

### Auditing Division

S. L. Walters, Tallahassee.....Auditor

B. A. Meginniss, Attorney for the Department,  
Editor and Business Manager.

Volume VII      December, 1930      Number 12

letter also gave an estimate of \$232,800 as the amount, exclusive of routine maintenance, necessary to be included in the budget for next year to continue the present type of work on said road.

On motion of Mr. Graham, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED, that the appropriation of \$50,000 heretofore made by the Department for State Road 44 be and the same is hereby transferred for use in the construction of the base on State Road No. 30.

### Project 73-C—Polk County

The Chairman presented to the members a letter from Mr. Chas. D. Snead, District Engineer for the Bureau of Public Roads, to the State Highway Engineer, authorizing the advertisement for bids for the construction of Project 73-C, Road 17, Polk County, such construction to be of plain cement concrete pavement or an alternate. It was determined that while the Department is not in a position just at this time to advertise for bids for the construction of said road, that when the same is advertised the notice will call for bids on alternate types in order to comply with the terms of the authority granted by the Bureau.

### Discussion of Finances

The members here entered upon a discussion and consideration of the financial condition of the Department.

### Expense Accounts Approved

On motion of Mr. Bentley, seconded by Mr. Shands, the expense accounts of the members were approved as follows, to-wit:

W. A. Shands.....	\$ 81.90
E. R. Graham.....	59.84
Geo. B. Hills .....	85.79
Robert W. Bentley.....	96.48

### Project 769—Caloosahatchee River Bridge

The State Highway Engineer made an informal report to the members on the subject of the contract of Central Station Equipment Company for the construction of Project 769, Road 5, Caloosahatchee River Bridge.

### Madison County—Road 35

The Chairman reported to the members that of the \$87,000 of bonds delivered by Madison County to the Department for the paving of Road 35, \$56,000 have now been sold, leaving \$31,000 still to be sold, the same being now with the Florida National Bank of Jacksonville which has a 30-day option to sell the same at 86% of par and accrued interest, the members having by letter and telegram approved the giving of such option.

On motion of Mr. Shands, seconded by Mr. Hills, the following resolution was adopted:

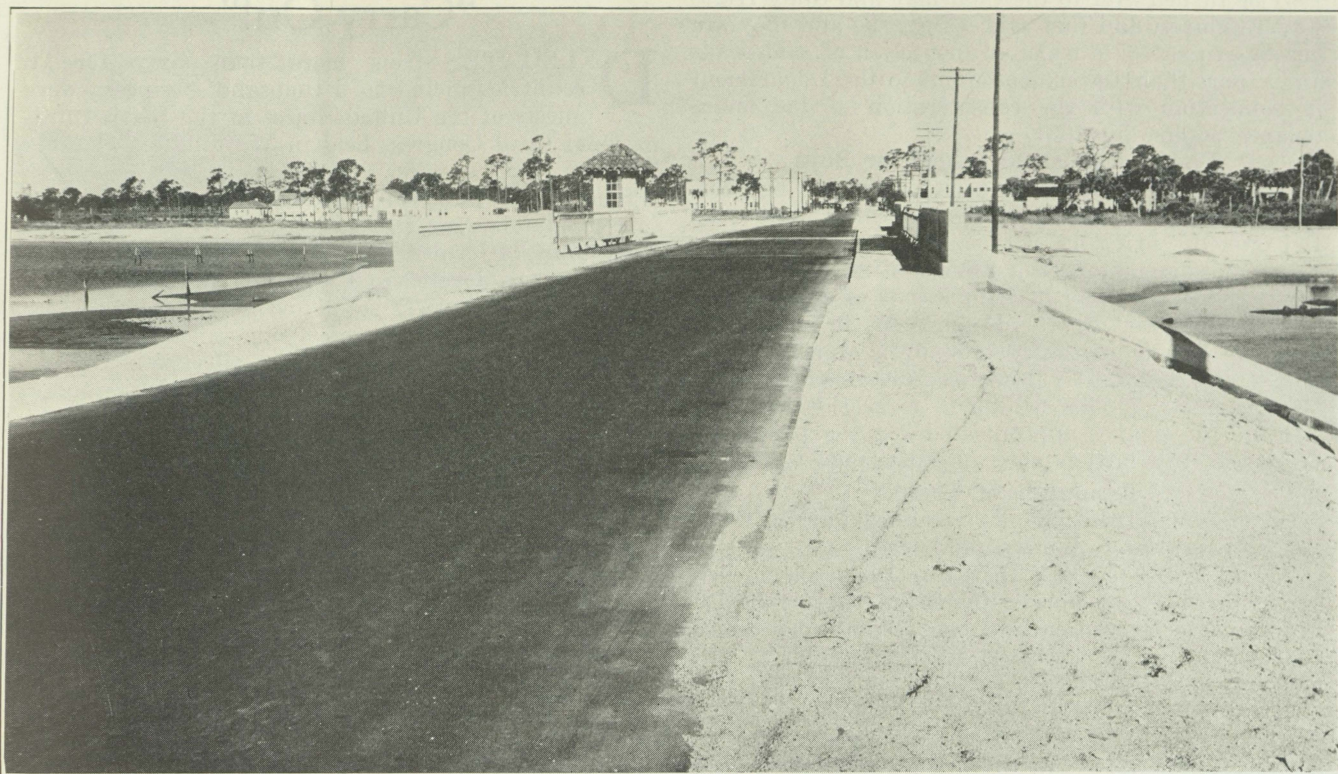
BE IT RESOLVED, that as soon as the money shall be available the Chairman be and he is hereby authorized to advertise for bids for the paving of State Road 35.

### Road 24—Osceola County

The State Highway Engineer presented to the members a bill from L. B. McLeod Construction Company for extra cost in connection with its contract for the construction of State Road 24 in Osceola County. The matter was explained by the Engineer and thoroughly considered by the members, after which, on motion of Mr. Hills, seconded by Mr. Graham, the following resolution was adopted:

BE IT RESOLVED, that this Department does approve and allow the claim of L. B. McLeod Construc-





Project 614, Road No. 5, Sarasota County.

tion Company in the sum of \$6,860.00 for extra cost in connection with its contract for the construction of State Road 24 in Osceola County.

#### **Sale and Purchase of Mules**

The State Highway Engineer reported to the members that he desires to sell certain of the mules owned by the Department which can be spared, and replace the same by purchase of other mules of the age of seven or eight years.

On motion of Mr. Shands, seconded by Mr. Graham, the following resolution was adopted:

**BE IT RESOLVED**, that the Chairman be and he is hereby authorized to sell, after the usual advertisement, such mules as shall be selected for sale by the Engineering Department, and that he be and he is hereby authorized to advertise for bids for the purchase of not exceeding eighty (80) mules as the same may be found necessary, such mules to average seven or eight years of age.

#### **Roads 3, 4 and 47**

On motion of Mr. Graham, seconded by Mr. Shands, the following resolution was adopted:

**WHEREAS**, various sections of the State of Florida, and particularly that area served by State Roads Numbers 3, 4 and 47, are, under existing conditions, compelled to pay tolls in crossing the St. Johns River at Jacksonville by any means now available; and

**WHEREAS**, various sections of the State have by different means expressed the proper opinion that the imposition of such tolls is prejudicial to the interests of the said sections of Florida; now, therefore,

**BE IT RESOLVED**, that the State Road Department does hereby authorize and direct its engineers to proceed forthwith in the making of such investigations and surveys as may be necessary to the preparation of plans for a bridge across the St. Johns River at or near Jacksonville, to be constructed by this Department as a unit of said Roads Numbers 3, 4 and 47.

On the adoption of the above resolution Mr. Hills voted "no," and Mr. Martin explained his affirmative vote by stating his policy to vote with the member from a Congressional District in matters which pertain chiefly to said district.

#### **Road 28—Palatka to Bunnell**

Mr. Hills presented to the Department a petition signed by a great many citizens of Flagler County, again requesting that the location of State Road 28 between Shell Bluff and Bunnell be changed to what is known as the southern route, the Department having heretofore adopted the northern route for its location. After some discussion the following resolution was, on motion of Mr. Hills, seconded by Mr. Graham, duly adopted:

**BE IT RESOLVED**, that the Chairman be and he is hereby authorized to notify the County Commissioners of Flagler County that if said Commissioners will secure and deliver to this Department by February 1, 1931, the necessary right of way along the southern route of State Road 28 between Shell Bluff and Bunnell, the Department will adopt said location; and otherwise will adhere to the present location, on what is known as the northern route.

#### **Projects 716 and 717**

Mr. Hills presented to the Department a letter from R. O. Connor of Jacksonville with reference to his claim against F. X. Bradley, which bill was incurred during the construction by said Bradley of Projects 716 and 717, Road 28, Bradford County. No action was taken on the matter, but the Attorney for the Department was requested to make answer to Mr. Connor.

#### **Budget Items**

On motion of Mr. Shands, seconded by Mr. Martin, the following resolution was adopted:

**BE IT RESOLVED**, that the lists of roads which shall be furnished by the members of the Department for proposed maintenance by the State beginning in



1931 be turned over to the Chairman and State Highway Engineer, and that said officers be and they are hereby requested to make an inspection of said roads and report their recommendations to the Department in connection with the consideration of the maintenance budget for 1931.

#### Florida Industrial School for Boys

Mr. Millard Davidson, Superintendent of the Florida Industrial School for Boys, appeared before the Department, bringing with him a letter from the Board of Commissioners of State Institutions requesting that the driveway in the grounds of said institution be improved by the Department in connection with the paving of the road between Marianna and said school. Mr. Davidson was informed that the Department would be willing to make this improvement if the money appropriated for the paving of said roads will include such improvement.

#### Resolution of Thanks

On motion of Mr. Shands, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED, that this Department does hereby express its sincere thanks to the Northwest Florida Association for the courtesies extended to the members by said association on the occasion of this meeting; and

BE IT FURTHER RESOLVED, that the thanks of this Department be extended to the San Carlos Hotel for the care and attention which they have given to the comfort and convenience of the officers and members of this Department.

On motion of Mr. Shands, seconded by Mr. Hills, the Department was adjourned.

## "Carry On!"

DELEGATES from more than sixty foreign countries including a thousand engineers were guests of the United States at the Sixth International Road Congress held in Washington, October 7-10.

Some three hundred representatives were invited to remain following the session and be conducted on three tours of inspection of American highways. The first tour was devoted to a study of high type, heavy traffic roads in densely populated industrial areas, including metropolitan area developments. The second trip included a thorough study of all types of roads, principally in agricultural areas and in temperate and semi-tropical zones, with special attention to the low cost roads in the semi-tropical part of the country. The third tour was devoted to all types of roads, with particular reference to winter conditions of frost and snow and low cost roads in northern latitudes.

It is fitting that these studies should be made in a nation which has taken the leadership in developing highway construction methods and materials. As a nation owning more than three-fourths of all the automobiles of the world, we have been forced to build a complete highway system.

Yet a large part of our present mileage of roads has been developed in a remarkably short period of time. Previous to 1904, untreated gravel and macadam were the prevailing types of surfacing used in this country on roads other than those in cities. In that year 60 million dollars was spent on road build-

(Continued on page 14).



Proj. 527, Safety Harbor Bridge, Road 17, Pinellas County





Road 10, Gulf County

## Foreign Engineers Carry Story of American Roads to Globe's Four Corners

**WIDESPREAD HOSPITALITY GREETs TOURS OF INSPECTION OF AUTOMOTIVE TRANSPORT  
SPONSORED BY HIGHWAY EDUCATION BOARD—MANY CITIES AND STATES  
VISITED EN ROUTE—TRAVEL LARGELY BY MOTOR BUS**

**Construction Methods, Materials Used and Results Obtained by United States in Highway Building  
Carefully Studied By 250 Official Delegates who attended Sixth International Road  
Congress**

CARRYING the story of America's highways to the far corners of the globe, some 250 builders and administrators of the world's highways are returning home from the western hemisphere to take up their duties with renewed vigor, a vigor and energy that is the direct result of 18 days' firsthand inspection of road systems in various states of the Union as guests of the Highway Education Board.

As official delegates to the Sixth International Road Congress, held in Washington October 6-11 at the invitation of the United States Government, these men were invited by the board to participate in one of three post-congress tours of inspection of highway construction and transportation. Each tour provided for observation of different problems of construction and traffic and thus the delegates, who were given a choice, were able to select the one which would provide conditions most similar to those found in their own countries.

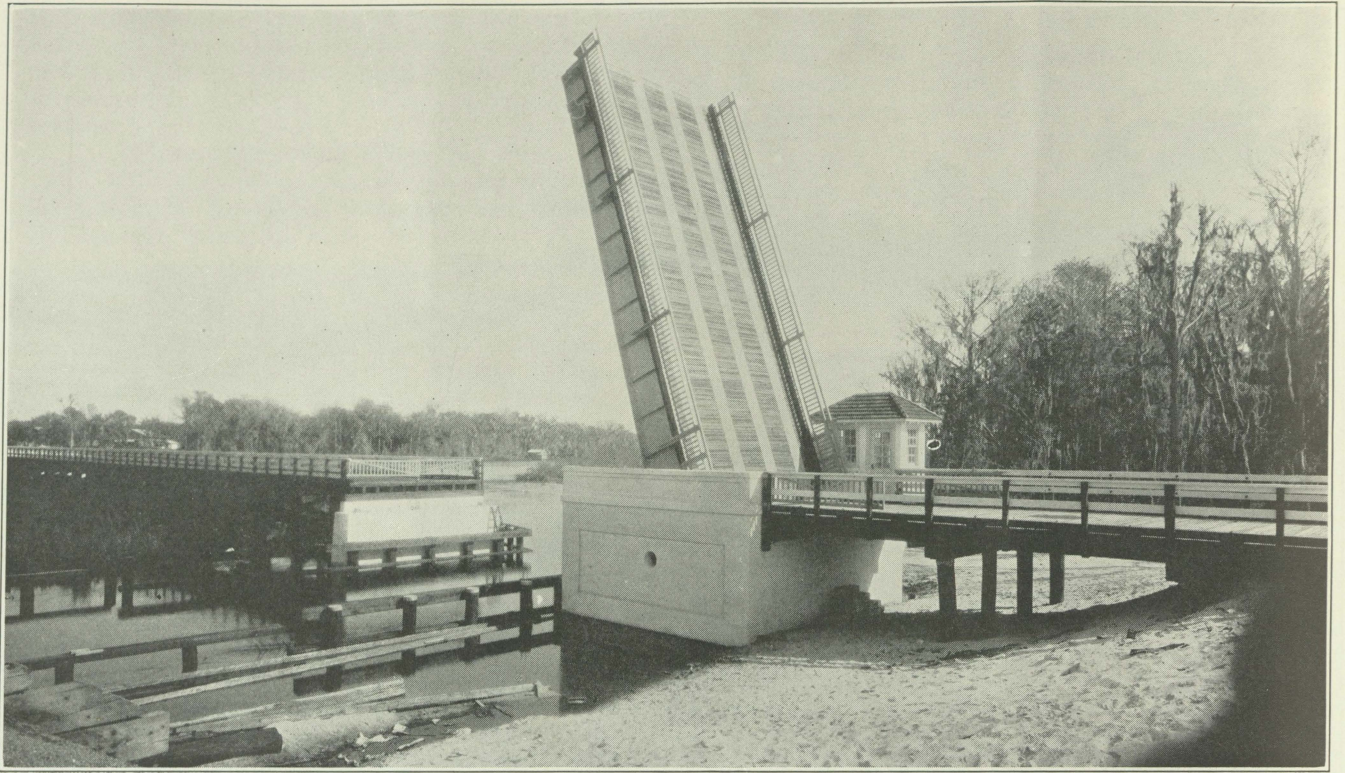
Heavy traffic, high type roads and a densely populated industrial area were inspected by Tour No. 1, going through New Jersey, Pennsylvania, New York, parts of New England and Ohio. Low cost roads, mountain highways, light to medium-heavy traffic in

a warm and what is primarily an agricultural but growing industrial area were provided by Tour No. 2, traveling through the South Atlantic Seaboard states of Virginia, North and South Carolina, Georgia and Florida, while Tour No. 3, moving from Washington to South Bend, Indiana, through Chicago and the states of Wisconsin, Minnesota, Iowa, Missouri and Illinois, offered the delegates the observation of both light and heavy traffic over varying types of roads, built to withstand the cold temperatures of the Northwest.

The building of America's highways, in the words of Thomas H. MacDonald, chief of the U. S. Bureau of Public Roads, has no counterpart in the public works of any nation, and many were the times that this fact was impressed upon the delegates. However, it was not by word of mouth that this was brought about. Rather was it left to their powers of observation and assimilation to become aware of it, a method which is far more convincing than a million words spoken by a party who, in the opinion of his hearers, is probably not only interested but slightly prejudiced.

Whetted by the deliberations of the road congress,





Project 695-B, Road 2, Lake County. Haines Creek.



Project 36-B, Road 4, Martin County



the delegates' appetites for the survey of American roads and road construction methods was at its height when the three tours departed from Washington, one north, one west and one south. In each state through which they passed they were accompanied by engineers from the state highway departments who took great pains to make full explanation of the various types of construction over which the busses carrying the parties were passing. Each delegate was supplied with a log book giving a detailed description of the cost of construction, traffic density and other information. Sections of road were identified by numbered signs that had been placed along the roadside by the state highway departments and as the heavy busses rolled along at high speeds, the delegates jotted notes on explanations from the representatives of the state highway department in their vehicle and marveled at the smoothness of the riding qualities of American roads and busses.

These copious notes, taken en route and in many cases enlarged upon after stopping for the night, will be supplemented with many photographs taken by the official photographers of the tours. These men, supplied with special cars which were generally some distance in advance of the remainder of the party, had particular instructions to take pictures of the actual construction operations, including machinery, construction stages, topography and other essentials, but to refrain, as far as possible, from taking pictures of groups of delegates and participants in the tours.

Without the worry of where and whether they would be able to obtain accommodations at their next stop, with no need to worry where their next meal was coming from, and with the care of their baggage delegated to an assistant manager who preceded the tour by the shortest route and had the baggage waiting in the rooms when delegates arrived at their hotel, everyone was able to give himself wholeheartedly to the business in hand, namely the examination of some new type of surface, the observation of some particular labor saving device or the question of building a base for a heavy traffic road through swamp land.

As each day on each tour brought new conditions, new types of construction, new incidents, each of the 250 foreign officials assimilated some new bit of information about America, its roads, its people, its industries and its countryside.

They learned that Chicago has beautiful boulevards and parks; that Milwaukee, once famous for its beer, manufactures great quantities of road-building equipment; that St. Paul and Minneapolis not only are flour-milling centers, but also great industrial cities; that Des Moines is a large publishing center and its near neighbor, Ames, was the birth-place of the present system of Iowa highways. Excellent examples of bridge construction were seen at St. Louis while on their way northward through Illinois, delegates inspected at first hand the results of bond financing of highways.

Delegates on the Eastern and Southern tours while traveling through country that is rich in the lore of America, had occasion not only to inspect the most modern highways, but also to become acquainted with other factors entering into American life.

New York, the world's financial mart, New Haven, a center of American learning, the quaint streets of old Boston, the intricacies of broadcasting and everything electrical at Schenectady, and the industrial activities of Rochester, Buffalo and Cleveland, were seen by the delegates on the northern tour, while those

traveling south visited the growing industrial cities of Lynchburg, Roanoke and Winston-Salem; the flourishing centers of Charlotte and Columbia, the famous towns of Charleston and Savannah and the fertile fields of Florida. All learned that results are not the only criterion by which Americans judge and that hospitality is still cherished in the hearts of the people.

All three tours ended at Detroit, the Southern tour going from Palm Beach to the automobile manufacturing center by rail. There the delegates were the guests of the automobile manufacturers of the Detroit district for several days. Inspection of traffic control, manufacturing plants, the international tunnel to Windsor and automobile testing grounds kept them busy during this period, after which the tours proceeded by train via Niagara Falls to New York City where they were disbanded.

Although some 60 national and colonial governments were represented on the three tours, all difficulties of language were overcome through the cooperation of the Departments of State and Commerce. The Department of State attached a number of consular officers to each tour while the Department of Commerce assigned several members of its foreign service, then home on leave, to accompany the tours. The United States Bureau of Public Roads also furnished two highway engineers for each tour and various other members of the staffs, including photographers. Each of the tours was accompanied by a staff of about fifteen Americans, including government representatives.

Supplementary to the invitation tours of the Highway Education Board, the American Automobile Association sponsored an all-expense tour for delegates not representing their governments. This party visited Pittsburgh, Akron, Cleveland, Detroit, Chicago, Niagara Falls, Buffalo, Boston and New York. While men, only, were invited to participate in the tours of the Highway Education Board, the one sponsored by the American Automobile Association was open to delegates and their wives.

What was the outstanding thing that impressed the delegates? It is difficult to say for very few of them were prepared for everything they saw or encountered while en route. Certainly the hospitality that was showered on them throughout the states they visited will long be cherished in their memories, while the accomplishments of our states in the construction and perfection of a system of highways that has no equal outside the United States will stand out as concrete illustration of what is possible if given the need and inspiration and they all have both.

#### Scotch and How!

Mrs. Gordon came into the house in a state of great alarm.

"Tammas, Tammas," she exclaimed, "there's a cow in the garden!"

"Dinna stand here wastin' valuable time," replied Tammas, "get back and milk it before it gets oot."

#### Polite Plumber

The gentleman had sent for a plumber to fix an upstairs tap, and as he and his wife started downstairs they met the plumber coming up. The gentleman said:

"Before I go downstairs I would like to acquaint you with the trouble."

The plumber politely removed his hat and murmured:

"Pleased to meet you, ma'am."





Project 40-A, Road 4, Brevard County

## A New Basis For Speed Regulation

By **MILLER McCLINTOCK**

Director, Albert Russel Erskine Bureau for Street Traffic Research, Harvard University.

**H**OW fast may automobiles be driven with safety? This question has long been recognized as one of the most difficult problems in highway regulation.

In the hope that this situation may be clarified the National Conference on Street and Highway Safety at Washington has promulgated a new basis for speed regulation. The new rule was formulated after a careful consideration of the methods which have been used in the several states. These may be summarized as follows:

So-called fixed speed limits were the earliest used in highway regulation and are still retained in several states, though they are generally considered obsolete. This method provides that speed in excess of the limits set is conclusive ground for conviction. The chief fault with this method lies in the fact that the application of the rule results in arbitrary and inflexible enforcement.

Driving conditions are so varied that it is quite impossible to set fixed rates of speed which can be equitably and safely applied. For the more favorable conditions they are of necessity too low, and for the less favorable conditions they are invariably too high.

No single factor in highway regulation has resulted in so much bad feeling between the driving public and the agencies of enforcement than has this type of speed control.

Realizing the inequity of fixed limits many states have attempted to soften the arbitrary results by adding the so-called prima facie clause. The speed limits

are retained but provision is made that an operator who is apprehended for exceeding the limit is not conclusively guilty, but only prima facie guilty, and that he may introduce evidence showing that under the conditions he was not driving in fact in a dangerous manner. In this form the rule is most generally used at the present time.

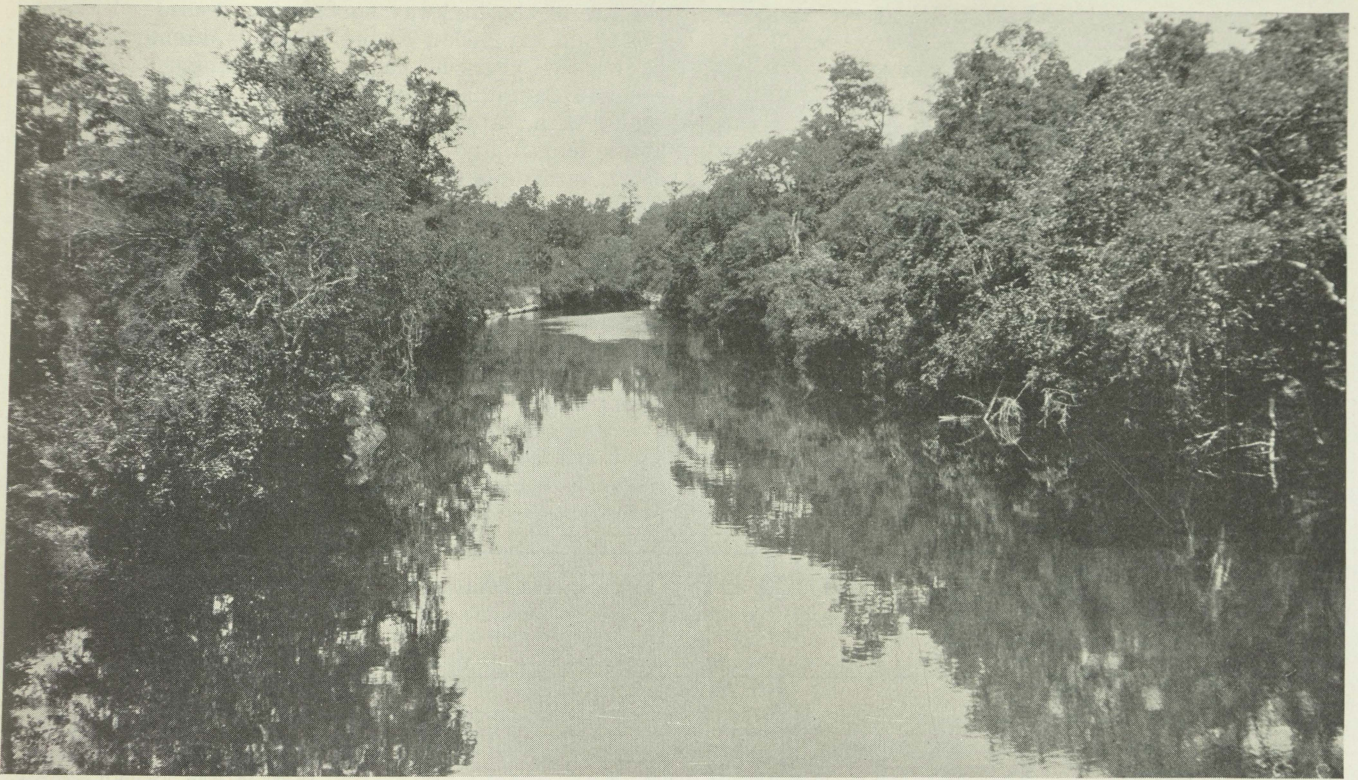
Theoretically it remedies many of the defects of the fixed limit regulation, but in actual practice there is little difference, for the courts are customarily unwilling to look favorably upon such refutory evidence even though the operator has time or desire to contest the case.

A number of states having tried both the fixed limit and the prima facie rule with poor success decided to abolish speed limits entirely and base their control on the requirement that operators should at all times drive at a reasonable and proper speed. Among these states are Connecticut, Michigan, Indiana and Kansas.

It is generally known among competent observers that speed limits have negligible effect upon the speed at which vehicles are operated. Drivers operate at that speed which appears to them to be safe and desirable under the circumstances. Periodical "drives" by motorcycle officers may temporarily affect this situation but not for long.

Recently the Albert Russel Erskine Bureau of Harvard University conducted investigations in several states having fixed limits, prima facie limits, and no limits. Under comparable traffic conditions the average highway speeds were approximately the same in all states.





Blue Springs, Jackson County

After reviewing current practice the National Conference on Street and Highway Safety determined that no one of the present rules was satisfactory, and that modern highway conditions demanded a new policy. Fixed and prima facie rules were discarded because of their inaccurate and inflexible quality. The abolition of all speed limits was not approved for it was felt that the practice left no guide for operators or for enforcing officers. In the new rule, therefore, there was an attempt to combine the good qualities of present practice and eliminate the evil.

The rule as promulgated by the Conference is in two parts. Part one, which is called the basic rule, prohibits (a) driving a vehicle "at a speed which is greater than is reasonable and proper," or (b) which is greater than will permit the operator "to decrease speed or stop as may be necessary to avoid colliding with any person, vehicle or conveyance."

Thus an operator is subject to conviction even though driving at a speed of five or ten miles an hour if under the conditions such action is in fact unreasonable or improper or results in collision. A conviction for violation of the provisions of the basic rule carries the normal penalties provided for general regulations. Technically, the basic rule accurately followed and enforced would be entirely adequate for the control of speed.

As a practical guide for such obedience and enforcement a second part of the rule is set forth under the title "application of indicated speeds." This part indicates speeds of 15 miles per hour near schools and under similar conditions, 20 miles per hour in business districts and other special locations, 25 miles per hour in residence districts and other specified locations, and 45 miles per hour in the open country.

These are not speed limits. An operator is not subject to conviction merely for having exceeded the indicated limits. Thus on an open highway under favorable conditions where there is no violation of the basic rule, a driver may operate at 50 or even 60

miles per hour. In other words, speed per se is not made an offense.

It is, however, used as a measure of the degree of any offense which may be called bad driving. This is the provision which makes the new speed regulation the most severe which has ever been enacted against reckless drivers. Any operator who while moving at a rate in excess of the indicated speed violates the basic rule by driving in an unreasonable or improper manner or so as to collide with any person or vehicle, or who violates any rule of the road, as for example driving on the wrong side of the road, cutting in, violating right of way or similar acts, is subject to the same penalty as that provided for reckless driving.

This begins with a minimum of \$25 fine or five days imprisonment or both, and has a maximum for a second offense of \$1,000 fine and six months imprisonment or both. The application of the rule will divert attention from merely technical rates of speed to actions which combined with speed result in hazards.

Heretofore highway driving has too frequently been a game of hide and seek between drivers and officers. The officer watched his speedometer and the operator his rear vision mirror. Under the new rule both will be watching manner of driving. The operator will know that he must drive slowly where conditions are unfavorable, but that he may legally drive rapidly under favorable conditions and in strict compliance with the laws of the road.

The new speed regulation of the National Conference on Street and Highway Safety may appear to be an innovation, but in fact it is merely a formal crystallization of the practice followed by intelligent operators for many years, and likewise by progressive and intelligent police departments.

The great advance is to be found in the fact that in the future those who depart from the rules will be subjected to very heavy penalties. Enforcement energies can now be concentrated on the really reckless drivers with the assurance that the punishment will fit their misdeeds.—Michigan Roads and Airports.



## "CARRY ON"

Continued from page 8

ing by the entire country; in 1928 New York state alone spent a sum almost double that amount and the entire country spent approximately one and a third billion dollars more. Figures for 1930 construction in the highway field are expected to reveal this as the banner road-building year of all times.

We can point with pride to the numerous tests and great amount of research which has been carried on in the interest of better highways. American industry has given the engineers materials tried by laboratory and field tests with which to work. These tests, augmented with service records of the products in actual usage, have determined the things which are being built into American highways. With their use the engineer has found himself better able to meet his problems of design in building for long-time use with materials which will not become obsolete before

the life of the highway surface has ceased. Viewing the rapid expansion of the roadway during the past twenty-five years he has seen the danger of obsolescence in design, and reacting to this is building wider roads with safe curves, wide bridges, culverts of ample length, and roadways free from headwalls and other hazardous obstructions. He has protected this roadway with proper drainage methods and organized departments to provide careful maintenance.

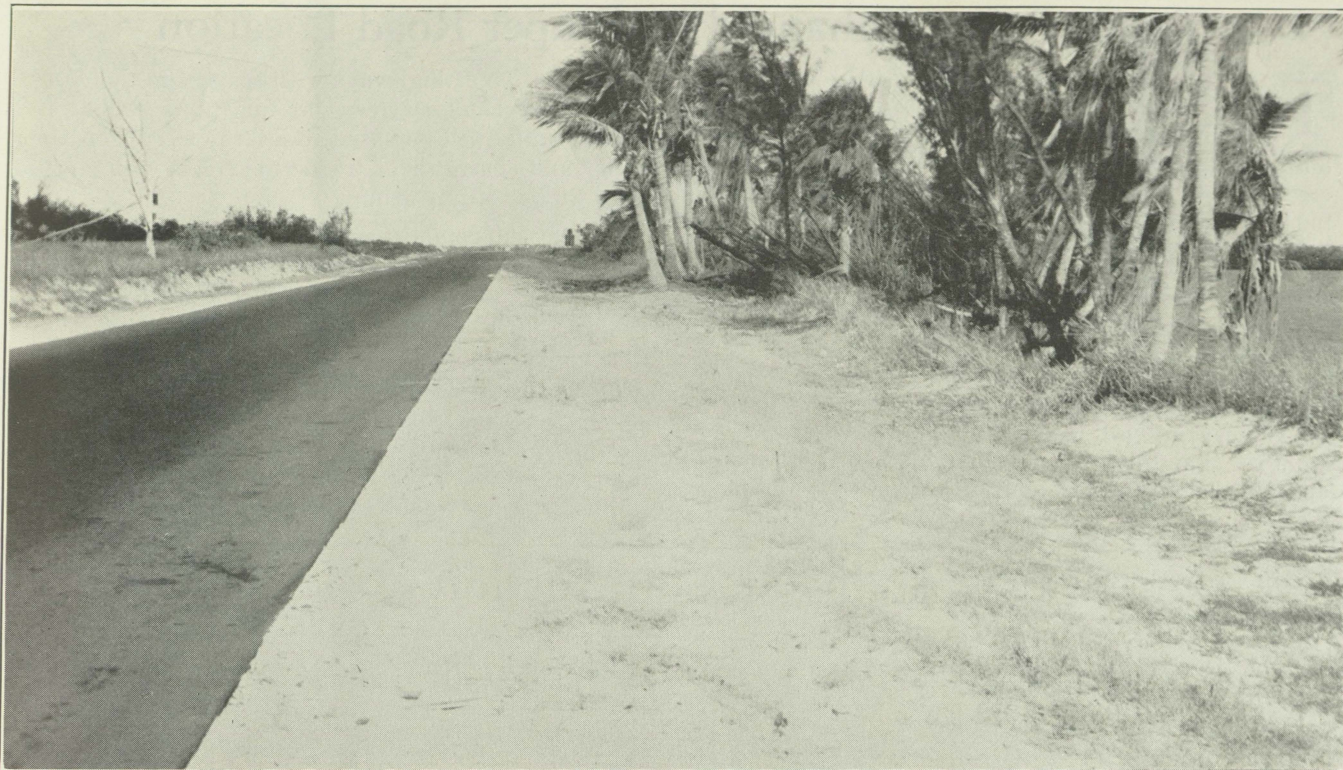
In our recent congress we have entertained eminent road builders from all parts of the world. Many nations represented are just entering the era which we entered twenty or twenty-five years ago. They have the advantage of following construction practices which have proved successful in our country and avoiding others which have outlived their usefulness. They are looking to the United States to continue its research in materials, construction and design; to set precedents.—The Highway Magazine.

## CONTRACTS AWARDED BY STATE ROAD DEPARTMENT

January 1st, 1929 to Dec. 22, 1930

Proj.	Road	County	Contractor	Length Miles	Length Feet	Contract + 10%	Type
FEDERAL PROJECTS							
70	5	Charlotte	Tampa Shipbldg. & Engr. Co.	75		\$ 45,676.40	Bascule
73-B	17	Polk	Cone Bros. Const. Co.		305	43,984.54	Conc. Bridge
20	1	Holmes-Washington	Florida Basic Rock Co.	2.0		19,800.00	Rock Base
62-A	24	Osceola	L. B. McLeod Const. Co.	5.22		123,676.65	R. B. S. T.
73-A	17	Polk	Wm. P. McDonald Const. Co.	3.66		88,283.19	Mac Asphalt
63-C	4	Broward	R. G. Lassiter & Co.	13.24		470,941.54	Concrete
74	2	Orange	Manly Const. Co.	14.34		387,032.94	Asp. Concrete
65	5	Hillsborough	C. C. Moore Const. Co.	.30		23,780.90	R. B. S. T.
40-B	4	Broward	L. M. Gray	.31		10,484.43	R. B. S. T.
68-A	4	Broward	S. P. Snyder & Sons	.37		28,972.93	R. B. S. T.
62-A	24	Osceola	L. B. McLeod Const. Co.	5.87		104,950.53	R. B. S. T.
62-D	24	Osceola	L. B. McLeod Const. Co.	12.66		307,070.29	R. B. S. T.
57	3	Nassau-Duval	R. C. Huffman Const. Co.	3.40		173,830.52	Embankment
66	5	Sarasota	R. C. Huffman Const. Co.		459	128,288.17	Conc. Bridge
75	27	Collier	Central Station Equip. Co.		561	125,332.26	Conc. Bridge
53-D	2	Lake	C. C. Moore Const. Co.	4.48		89,131.49	C. G. & G.
71	4	Brevard	Okeechobee Const. Co.		174	74,473.84	Concrete
73-D	17	Polk	John J. Quinn, Inc.	9.92		289,544.58	Concrete
TOTALS				75.77	1,574	\$2,535,255.20	
STATE PROJECTS							
757-B	2	Polk	Florida Bridge & Const. Co.		117	15,234.78	Conc. Bridge
758-B	2	Polk	Cone Brothers Const. Co.		436	59,267.06	Conc. Bridge
698	19	Leon	H. E. Wolfe Const. Co. Inc.	12.45		276,425.45	Concrete
721-B	3	Putnam	L. M. Gray	.25		18,829.00	R. B. S. T.
835	5	Marion-Citrus	Manly Const. Co.	.15		4,439.71	R. B. S. T.
587-B	5-A	Suwannee	Duval Engineering & Contr. Co.	.34		17,736.22	R. B. S. T.
876-A	78	Duval-St. Johns	Standard Dredging Co.	8.00		81,574.76	Shell Base
758	2	Polk	A. E. Campbell	.10		2,095.74	R. B. S. T.
500-B & C							
515	20	Bay-Jackson	Marianna Lime Products Co.	29.43		328,212.85	R. B.
750	14	Gilchrist	L. M. Gray	12.26		109,936.23	R. B.
669-Y	27	Collier	Fred D. Beasley, Inc.	10.55		22,320.49	Surf. Treatm't.
769	5	Lee	Fred D. Beasley, Inc.	1.89		26,988.64	R. B.
870	143	Palm Beach	Central Fla. Const. Co.		135	8,790.26	Timber
766	10	Bay	Fla. Bridge & Const. Co.		555	4,461.47	Timber
688	10	Bay	R. J. Arrington & Son		60	396.16	Timber
767	10	Bay	J. U. Fletcher		45	751.43	Timber
669-C	27	Dade	Everglades Const. Corp.	9.48		13,183.50	Rock Cap
911	68	Bradford	Duval Engr. & Contr. Co.	3.50		24,069.54	Rock Base
714	28	Union	F. W. Long & Co.	9.14		88,172.06	Rock Base
708	11	Jefferson	Duval Engr. & Contr. Co.	7.98		130,331.33	R. B. S. T.
806-A	25	Hendry	E. F. Powers Const. Co.	11.00		199,911.51	R. B. S. T.
715-B	28	Union-Bradford	Fla. Bridge & Contr. Co.		783	79,872.68	Conc. Bridge
898	4-A	Monroe	The Belcher Oil Co.	5.00		5,982.24	Surf. Treat'd.
745	19	Taylor	Fred D. Beasley, Inc.	15.95		190,777.88	Rock Base
876-C	78	Duval-St. Johns	R. G. Lassiter & Co.	19.20		330,866.43	Rock Base
884	3	Duval	Baker & Holmes	.50		7,425.00	Concrete
869	29	Glades	Reid W. Bryan	9.04		128,714.13	Grading
720	11	Jefferson	Duval Engr. & Contr. Co.	9.70		191,955.23	R. B. S. T.
608-B-2	4	Brevard	J. D. F. Boggs	1.07		36,034.58	R. B. S. T.
677-B	13	Levy	Langston Const. Co.	12.58		150,760.36	Rock Base
741	13	Alachua	L. M. Gray	1.00		11,918.50	Rock Base
770	22	Brevard	Standard Asph. Co. of Fla.	3.30		54,906.65	R. B. S. T.
915	140	Palm Beach	E. F. Powers Const. Co.	2.00		31,318.10	R. B. (Sand)
892-951	30	Indian River	Fred D. Beasley, Inc.			42,075.00	R. B. (Sand)
535	5-A	Lafayette	Wm. P. McDonald Const. Co.	13.20		186,802.08	Rock Base
802-B	10	Okaloosa	J. R. Chambliss		1986	62,207.20	Timber
695	2	Lake	Manly Construction Co.	2.48		5,130.77	C. G. & G.
952	3	Putnam	Powell Bros.		360	91,413.96	Conc. & Steel
884	3	Duval	Walter J. Bryson Pav. Co.			9,829.60	Hot Mix.
884	3	Duval	Macasphalt Corp. of Fla.	4.00		34,288.02	Macasphalt
884	3	Duval	Capital Concrete Co.			32,654.20	Concrete.
883	4	Duval	John E. Ballenger Const. Co.	4.72		108,914.92	Macasph.
885	3	Duval	Robert G. Lassiter	4.86		110,589.73	Macasph.
685	10	Franklin	Nelson Bros.			7,623.00	Hauling
727	47	St. Johns	L. M. Gray	6.00		77,164.95	Rock Base
801-B	48	Union-Bradford	Bd. Commissioners State Institutions		718	73,054.71	Concrete
806-C-D	25	Hendry	L. B. McLeod Const. Co.	23.69		312,633.81	Rock Base
TOTAL STATE				254.81	5,195	\$3,808,041.92	
GRAND TOTAL				330.58	6,769	\$6,343,297.12	





Project 640-B, Road 4, Martin County

## Territorial Road Contract Found

Estimated Cost of 36-Mile Highway Was \$4,000—Black Walnut Optional in Bridge.

**A** ROAD CONTRACT, signed May 25, 1855, offers an interesting insight into road building in territorial days of Minnesota. The document is considered very rare, because few roads at that time were built by contract on definite plans and specifications. The type of the road and the cost offer a striking contrast to the highways required to carry traffic today.

The document was sent to C. M. Babcock, commissioner of highways of Minnesota, by Miss Anna Hartin, of St. Paul, who found it among some papers belonging to her mother. It is in longhand, and well preserved. The signers were J. H. Simpson, captain, U. S. corps of topographical engineers, and J. P. Newton and J. W. McComb, of St. Paul, who took the job. On the back it is indorsed, "Approved, S. Cooper, acting secretary of war."

A printed copy of the advertisement for bids is attached. One section of the road was to be built from Mendota to the Cannon river, with a bridge over the Vermillion river. The distance was "36½ miles more or less." A second section was to be built from the Cannon river to Red Wing, "17½ miles more or less." "The probable amount to be expended on each section will be \$4,000, more or less, as may be found expedient," the announcement said.

The plans called for opening a road 25 to 66 feet wide, all trees and brush to be cut down. A center strip was to be "cleared and grubbed, the holes to be filled up, and knolls leveled off. The roadway, in places requiring it, to be embanked to such height as ordered, and to be 18 feet wide on top. In places where ordered, these embankments to have a foun-

dation of logs laid close together and extending 18 feet across the road."

The contractors agreed to do the work at the following prices:

"Grubbing and clearing the center strip, including the filling up the small holes and leveling off the hillocks or small knobs for fifty dollars per acre.

"Cutting down trees and brush outside the center strip for seven dollars per acre.

"Earthwork including haul of 100 feet for 20 cents per cubic yard; over 100 and up to 300 feet 23 cents per cubic yard.

"The corduroying or logging of the causeways for three dollars per rod lengthwise of the road.

"Timber and lumber in the bridge over the Vermillion river for fifty dollars per thousand feet board measure, the bolts for 26 cents per pound." The superstructure was to be of "pine, of a good quality. The pins to be of white or burr oak of the best quality and well seasoned. The abutments may be of pine, white oak, red elm, rock elm, or black walnut." The kind of wood for other bridges and culverts was not specified, but the contractors agreed to furnish and install timbers for 15 cents per running foot, flooring for 15 cents per surface foot, the railing for fifty dollars per 1,000 feet board measure.

### Worse Than Chile

Husband (feeling a twinge in the back while he is tuning in the wireless receiver): "I believe I'm getting lumbago."

Wife: "What's the use, dear? You won't be able to understand a word they say."—Epworth Herald.



## Traffic Safety Enhanced by Proper Road Location

**T**HOUSANDS of human lives sacrificed to modern motor traffic would have been saved if the highways had been properly located when they were built, in the opinion of R. Getty Browning, locating engineer of the North Carolina State Highway Department.

In his work as location committee chairman for the American Road Builders' Association, Browning will direct the work of eight groups of state highway engineers from throughout the nation which are studying different phases of highway location.

"Our ultimate goal," Browning declares, "is to arouse public opinion to the great importance of correctly locating all the public highways, not only from the standpoint of economy of construction and operation, but for the better protection of human life."

Classification of highways with respect to their importance for local service, and for rapid transit to distant points, will be based to a large extent on the density and character of traffic the roads will carry, in the studies of one group.

Another sub-committee subject will be visibility and a study will be made of all available data and experience tending to show the minimum clear sight distance which should be provided on these different types of highways.

The subject of grade crossings is considered of vast importance, and the group studying them will attempt to point out which situations justify immediate expenditures for re-location or grade separation, since it is evident that all grade crossings can

### Status of Construction

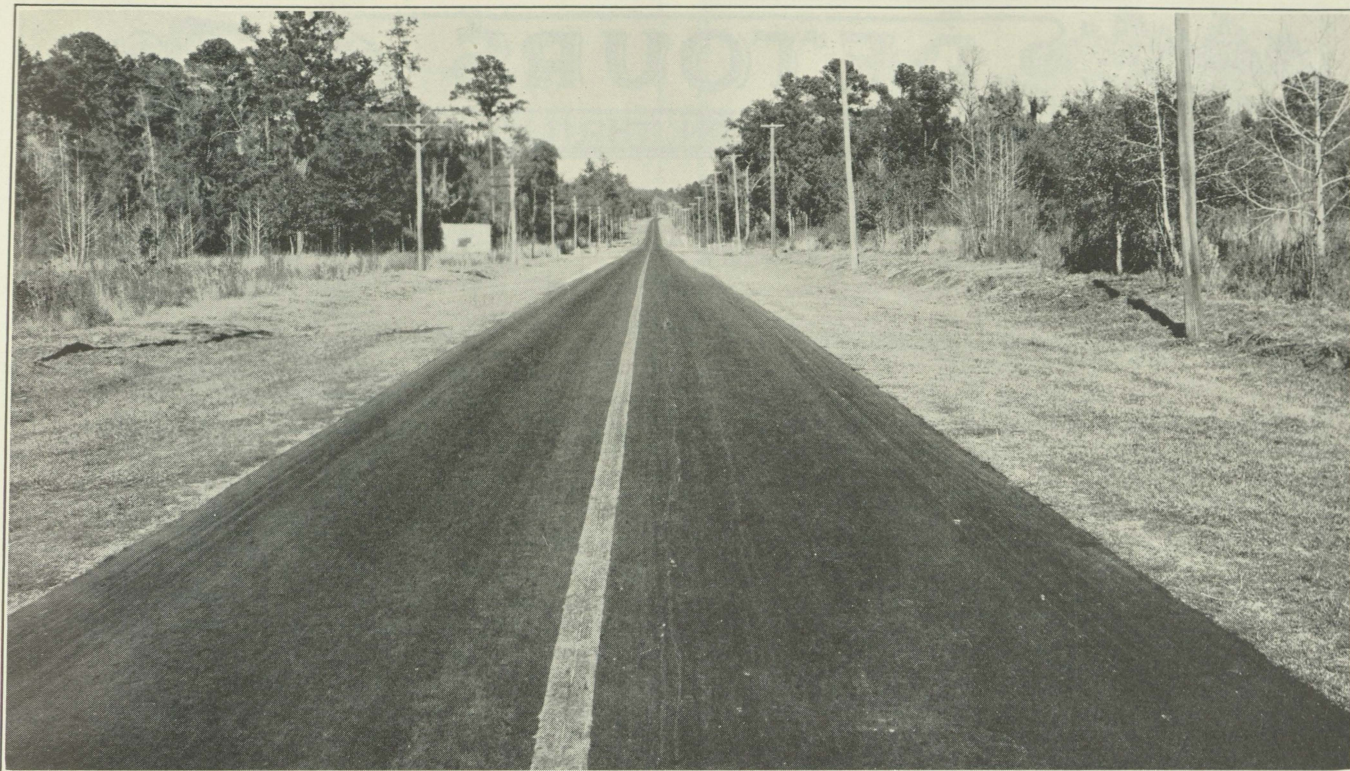
Through November 30th, 1930

Proj. No.	Contractor	Road No.	County	Total Length Miles	Clearing Miles	Grading Miles	Base Miles	Surface Miles	Type	Per Cent Complete
53-D	C. C. Moore Const. Co.	2	Lake	4.48	.50	.35			Grading	13.00
57	R. C. Huffman Const. Co.	3	Nassau-Duval	3.40	1.02	.19			Grading	7.00
62-A	L. B. McLeod Const. Co.	24	Osceola	5.87			4.76	0.00	R.B.S.T.	80.00
62-D	L. B. McLeod Const. Co.	24	Osceola	12.66			12.66	0.00	R.B.S.T.	80.00
63-A	Morgan-Hill Paving Co.	4	Palm Beach	9.21				9.21	Concrete	100.00
63-C	Robt. G. Lassiter & Co.	4	Broward	13.24				12.46	Concrete	90.00
68-A	S. P. Snyder & Son	4	Broward	.37			.37	.37	R.B.S.T.	100.00
73-A	Wm. P. McDonald Const. Co.	17	Polk	3.66			3.66	3.66	Mac.Asph.	0.00
74	Manly Const. Co.	2	Orange	14.34			14.34	14.34	Bit. Conc.	97.00
500-B	Marianna Lime Prod. Co.	20	Bay	12.65			1.00	0.00	R.B.S.T.	5.00
500-C	Marianna Lime Prod. Co.	20	Bay	12.18			8.00	3.00	R.B.S.T.	70.00
515	Marianna Lime Prod. Co.	20	Jackson	4.59			0.00	0.00	R.B.S.T.	0.00
535	Wm. P. McDonald Const. Co.	5-A	Lafayette	13.20			.85	0.00	R.B.S.T.	6.00
608-B-2	J. D. F. Boggs	4	Brevard	1.07	.41	.44	0.00	0.00	R.B.S.T.	30.00
677-B	Langston Const. Co.	13	Levy	12.58			2.00	0.00	R.B.S.T.	19.40
695	Manly Const. Co.	2	Lake	2.48	2.00	1.00			Grading	50.00
708	Duval Engr. & Contr. Co.	11	Jefferson	7.98			7.98	4.00	R.B.S.T.	90.00
713	Convicts	28	Columbia	10.00			10.00	10.00	R.B.S.T.	100.00
714	F. W. Long & Co.	28	Union	9.14			9.14	5.00	R.B.S.T.	90.00
720	Duval Engr. & Contr. Co.	11	Jefferson	9.70			9.00	2.00	R.B.S.T.	75.00
727	L. M. Gray	47	St. Johns	6.00			0.00	0.00	R.B.S.T.	0.00
745	Fred D. Beasley, Inc.	19	Taylor	15.95			15.95	0.00	R.B.S.T.	85.00
750	L. M. Gray	14	Gilchrist	12.26			12.26	12.26	R.B.S.T.	100.00
769	Fred D. Beasley, Inc.	5	Lee	1.89			1.89	1.89	R.B.S.T.	100.00
770	Standard Asph. Co. of Fla.	22	Brevard	4.38			2.75	0.00	R.B.S.T.	70.00
787	Convicts	10	Walton	16.27	16.27	15.25			Grading	92.00
798	Convicts	13	Nassau	15.03	13.48	11.50			Grading	81.30
801	Convicts	48	Bradford-Union	11.78	8.84	8.84			Grading	75.00
805	Convicts	25	Hendry	9.42	9.42	.80			Grading	15.00
806-A	E. F. Powers Const. Co.	25	Hendry	11.00			11.00	2.25	R.B.S.T.	75.00
820	H. D. Spangler & Co.	96	Jefferson	9.45	8.98	7.56			Grading	72.00
825	Convicts	88	Holmes	10.37	8.00	6.00			Grading	52.00
833	Convicts	10	Santa Rosa	8.02	8.02	8.02			Grading	90.00
845	Convicts	19	Taylor	8.57	8.57	8.57			Grading	99.00
846	Convicts	19	Taylor	11.00	11.00	10.45			Grading	96.00
857	Convicts	53	Santa Rosa	19.00	3.00	2.00			Grading	10.00
868-C	Convicts	5	Levy	12.34	9.00	7.85			Grading	50.00
869	Reid W. Bryan	29	Glades	9.04	1.00	.75			Grading	12.00
870	S. J. Groves & Sons	143	Palm Beach	10.83	10.83	10.83	5.60	0.00	R.B.S.T.	85.00
875	Convicts	23	Hernando	10.14	1.00	0.00			Graded	3.00
876	Convicts	78	Duval-St. Johns	28.90	26.02				Grading	93.00
876-A	Standard Dredging Co.	78	Duval	9.70			9.70	9.70	R.B.S.T.	100.00
876-C	Robert G. Lassiter & Co.	78	Duval-St. Johns	19.20			5.36	0.00	R.B.S.T.	25.00
878	Convicts	77	Gilchrist	10.48	10.48	10.00			Grading	98.00
883	John E. Ballenger Const. Co.	4	Duval	4.72			0.00	0.00	Macasph.	0.00
884	Macasphalt Corp. of Fla.	3	Duval	4.00	2.45	2.33	2.20	0.00	Macasph.	50.00
885	Robert G. Lassiter & Co.	3	Duval	4.86			0.00	0.00	Macasph.	0.00
911	Duval Engr. & Contr. Co.	68	Bradford	3.45	3.45	3.45	3.45	3.45	R.B.S.T.	100.00
927	Convicts		Jackson	2.00	2.00	.50		0.00	S.C.S.T.	15.00
Total complete November 30th, 1930					3100.92	3069.32	1729.68	2528.87		
Complete month of November					16.57	9.28	48.74	24.86		
Total complete October 31st, 1930					3084.35	3060.04	1680.94	2504.01		

#### TOTAL MILEAGE COMPLETE

	Concrete	Brick	B.C.	S.A.	B.M.	Asph.B.	R.B.S.T.	S.C.S.T.	S.C.	Mac-Asph.	Marl	Total
Complete to Oct. 31, 1930	375.36	17.13	52.92	114.75	109.57	23.70	1410.31	290.54	205.23	4.11	27.58	2631.22
Complete month of November	2.74		.72				46.72	.30		.78		51.26
Complete to Nov. 30, 1930	378.10	17.13	53.64	114.75	109.57	23.70	1457.03	290.84	205.23	4.89	27.58	2682.48





Project 545, Road 5, Hernando County

not be removed because of the tremendous expense involved.

Another question to be studied will be the application of limited funds to road building where the alternatives are completion of high type paving with grade crossings, or separating the grades and using a cheaper type of paving.

The effect bridges and culverts have upon highway location is seen, for example, where a highway has been greatly lengthened in order to use an existing bridge, whereas it probably would have been much cheaper, considering through traffic, to have shortened the line and built a new bridge. The need of full width of roadway over small culverts to overcome the dangers of short span, narrow bridges with vertical headwalls, is pointed out.

The group studying spur roads will investigate the question as to whether main arteries of travel shall be diverted around a town or village or carried directly through the center. Spur roads might be constructed from main lines into the local centers of population, thus eliminating congestion, danger and delay to through traffic. Conditions will be cited under which either method is to be preferred.

The fallacy of economizing on the grading of a highway to such extent that alignment, grades and visibility are unsatisfactory will guide the investigators of the distribution of construction costs. It is thought that if a road be located correctly, sufficient grading done to secure easy grades, good visibility and sufficient width to accommodate present and future traffic, the cost of this item of construction properly might be distributed through the life of the road, although the cost of paving and other items might be charged off within a reasonable term of years.

Data from automobile clubs, bus lines, trucking concerns and other motor agencies will assist a subcommittee in ascertaining the maximum length of

maximum grades which might be permissible on different types of highways. Upon a proper solution of this question depends in a large degree the cost of construction of any given highway, particularly in hilly or mountain country. In view of the endeavor for greater vehicular speed and power, it is thought preferable to use the steepest allowable grades, if by so doing the visibility can be proportionately increased. Securing the best possible alignment is advisable, even though the grades must be increased somewhat.

Many questions have been met by the group studying highway curves, such as that of superelevation and the formula for it; the widening and spiralling of short radius curves; maximum curves on different types of roads; reduction of grades on curves, under what circumstances and to what extent; the use of reverse curves where satisfactory vision can be secured.

All the facts brought out, and recommendations of these engineering authorities will be incorporated in the report on highway location to be presented by Chairman Browning at the American Road Builders' Association Convention and Road Show in St. Louis, January 10-16, 1931. Motion pictures will show, by striking contrasts, the benefits of proper location. With the widespread interest in this subject, Browning's report is expected to be a highlight of a very comprehensive convention program. Research in the field of location is practically new, and the committee findings will be of great value to all highway engineers and ultimately to the public they serve.

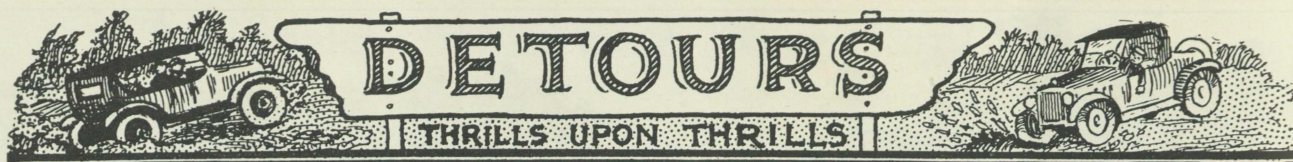
#### The Boy Who Made Good

Null: "I started out with the theory that the world had an opening for me."

Void: "And you found it."

Null: "Well, rather. I'm in the hole now."





### Speechless Emotion

"Hallo, where have you been?"

"To the station to see my wife off for a month's holiday."

"But how black your hands are!"

"Yes, I patted the engine."—Nebelspalter.

### No Sense To It

"My wife's sense of humor is bad. The other day I heard a good conundrum and decided to catch her on it."

"Why are men like mules?" I asked her when I went home.

"Don't judge all men by yourself," was her meaningless answer."

Book Agent to Farmer: "You ought to buy an encyclopedia, now your boy is going to school."

Farmer: "Not on your life! Let him walk, the same as I did."

### Easy Honors

Smart Alec (getting on bus): "Morning, Noah, is your ark full?"

Driver: "Nope. Only one jackass so far. Come on in."

Bricklayer (new on job): "Guess I can't work here. There's no place to park my car."

Boss: "No, you won't do. We only hire bricklayers who have their own chauffeurs."

The weatherman dreamed that himself was dead; That he stood by his monument, tall, and read The message thereon—and he hung his head, For "Probably Warmer" was all it said.

### Aids to Loquacity

Whene'er a hen lays eggs, with each

She is impelled to make a speech.

The selfsame urge stirs human bones

Whenever men lay cornerstones.

—Baron Ireland in Life.

### Just Natural—

"Your wife has been delirious all day," said the nurse, in a worried tone, "calling for you and crying for money."

"Hah!" snorted friend husband. "Delirious, hell!"

### Guessed Wrong

He sat down at a highbrow restaurant, pointed to a line on the French menu card and said to the waiter: "Bring me some of that."

"Sorry, sir," answered the waiter, "the orchestra is playing that."

One: "Do you know why Washington threw the silver dollar across the Potomac?"

Two: "No, why?"

Three: "He was teaching a couple of Scotchmen how to swim."

Beneath the spreading chestnut tree  
The smith works like the deuce.  
For now he's selling gasoline,  
Hot dogs and orange juice.

### True Consolation

"In time of trial," inquired the speaker, "what brings us the greatest comfort?"

"An acquittal," interrupted a man at the back of the hall.—Christian Evangelist.

### Waiting Game

Fond Mother: "How much do you charge for taking children's photographs?"

Photographer: "Five dollars a dozen."

Fond Mother: "You'll have to give me more time, I have only ten now."

Government experts say you can buy more with a dollar now than you could this time last year, and what we hope is that they are now at work on a bulletin telling where to get the dollar.—Macon Telegraph.

Slightly delirious financier: "Nurse, what did you say my temperature is?"

Nurse: "One hundred and three, sir."

S. D. F.: "Right! When it gets to 103½, sell."

### Curious Indeed

A curious little boy was watching a car being loaded at the station, and later inquired: "Why do they call it a shipment when it goes in a car and a cargo when it goes in a ship?"

### Fare Exchange

A stout woman wedged into a crowded street car was having difficulty in getting into her tightly-buttoned jacket pocket to extract her fare.

"Madam," said a man next to her, during her fruitless struggles, "let me pay your fare."

She protested rather indignantly.

"My only reason for wishing to do so," he said, "is that you've unbuttoned my suspenders three times trying to get into your pockets."

In days of yore, if anybody missed a stage-coach he was contented to wait two or three days for the next one. Now he lets out a squawk if he misses one section of a revolving door.

Suave Auto Salesman: "It runs so smoothly you can't feel it, so quietly you can't hear it, has such perfect ignition you can't smell it, and as for speed—you can't see it."

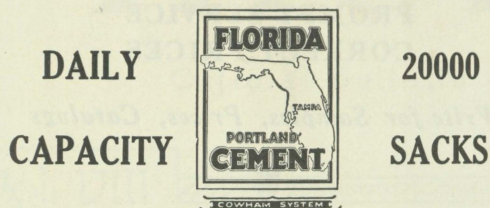
Londoner: "My word! How do you know the bally thing is there?"

The next big increase in cigarette sales will come when somebody discovers that cigarettes contain the same vitamins as spinach.



# Florida Cement

EXCEEDS  
State Highway Specifications



"A Florida Product for Florida Construction"

**Florida Portland Cement Co.**  
Tampa, Florida

# Pensacola Creosoting Company, Inc.

PENSACOLA, FLORIDA

Specializing in the manufacture and  
treatment of the following Forest  
Products

**PILING - CROSS TIES - POLES  
CROSS ARMS - CONDUITS - LUM-  
BER and STRUCTURAL TIMBERS**

Your inquiries solicited—Cost estimates gladly  
furnished.

Cable address "Pencreo" — Shipments: Rail or Water

# PRINTING

Every printing need for the road builder, eco-  
nomically produced. Accuracy, quality and  
quick action have made for this firm an envi-  
able reputation.

**APPLEYARD'S**

*Foremost Printers of Florida*  
Tallahassee, Florida

OUR SERVICE ON

# Contract Bonds

and all other classes of Surety Bonds is unsur-  
passed.

**American Surety Company  
of New York**

Atlanta, Ga., Branch Office, Fourth Floor, Citizens  
and Southern Bank Bldg.  
H. N. HUTCHINSON, Manager.

## Emotions of Fatherhood

A man was discovered by his wife one night stand-  
ing over his baby's crib. Silently she watched him.  
As he stood looking down at the sleeping infant, she  
saw in his face a mixture of emotions—rapture,  
doubt, admiration, despair, ecstasy, incredulity.  
Touched and wondering alike at this unusual parental  
attitude and the conflicting emotions, the wife with  
eyes glistening arose and slipped her arms around  
him.

"A penny for your thoughts," she said, in a voice  
tremulous with tenderness.

Startled into consciousness, he blurted them out:  
"For the life of me, I can't see how anybody can  
make a crib like that for three forty-nine!"

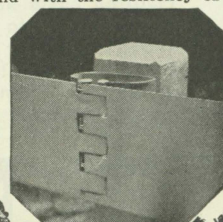
## SMOOTH RESILIENT STRONG

With its interlocking spring connection holding the broad  
smooth rail six inches from the post, and with the resiliency of  
the rail itself, the Resiliflex Road Guard has the ability to withstand tremendous  
shocks with the least possibility of  
damage to motorists, vehicles or the  
rail itself. Write for literature.

**RESILIFLEX**  
ROAD GUARD

NATIONAL TRAFFIC GUARD CO.

ATLANTA,  
GA.





## Established in Florida

FOR MANY YEARS DUDLEY PRODUCTS  
HAVE BEEN SUCCESSFULLY USED  
IN FLORIDA CONSTRUCTION

REINFORCING BARS FOR CONCRETE  
BRIDGES AND PAVEMENTS

METAL CENTER JOINTS; PRE-MOULDED  
ASPHALT JOINTS; ASPHALT BRIDGE  
PLANKING; BOLTS; BEARING  
PLATES, ETC.

GUARD RAIL MESH

## Dudley Bar Company

Manufacturers and Distributors

BIRMINGHAM, ALA.

SOLD THROUGH

A. R. MERRILL

Sales Agent

1st. Nat. Bank Bldg., Tampa, Fla.

## TECHNICAL GOODS

*for the*

Engineer and Architect

*Representing the Leading Manufacturers*

COMPLETE STOCKS  
PROMPT SERVICE  
CORRECT PRICES

*Write for Samples, Prices, Catalogs*



THE H. & W. B. DREW CO.

Stationers and Booksellers

Printers and Lithographers

Complete Office Outfitters

JACKSONVILLE, FLORIDA

*Sales Offices in Miami and Tallahassee*



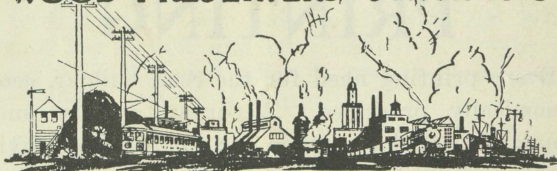
### EXTRA PAVING PROFITS

Due to its extreme light weight, substantial paving economies are realized through the use of Woodstock slag. . . savings that mean a profit to the builder. Freight rates are less. Hauling costs are lower. Quick, easy handling on the job. No expensive delays either, when Woodstock Slag is used . . . two big plants and two shipping points keep slag on the job ahead of the workmen. Write for prices and additional facts.

# Woodstock Slag Corporation

SOUTHERN RAILWAY BLDG. •• BIRMINGHAM, ALABAMA  
FLORIDA OFFICE : 525 PROFESSIONAL BLDG., TAMPA, FLA.

## WOOD PRESERVERS SINCE 1878



### PERMANENT INVESTMENTS

are wise investments. Every dollar invested in ZMA or CREOSOTE treated forest products yields a profitable return.

The treatment of piles, poles and general construction material with ZMA or CREOSOTE insures long life and satisfactory service. ZMA treated lumber and timber can be painted any color—will not injure paint—is odorless and will not decay.

Eppinger & Russell Co. can show you how to secure lumber and timber construction material that will last and last.

10 Murray St., Suite 1812, New York City

PLANTS—Jacksonville, Fla.

and

Long Island City, N. Y.



**CREOSOTE**

WOOD PRESERVERS SINCE 1878  
**EPPINGER & RUSSELL Co.**